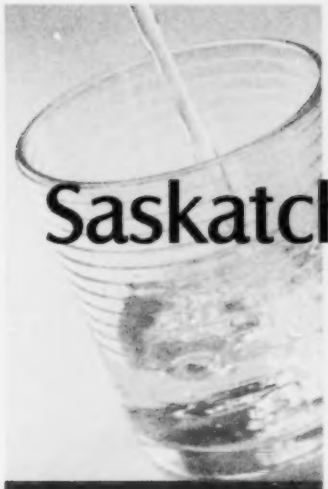

Saskatchewan's Safe **Drinking Water Strategy**

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Everyone in Saskatchewan needs a good supply of safe, clean drinking water. Saskatchewan's Safe Drinking Water Strategy outlines the province's plans to meet that need and to protect and conserve our water supplies now and into the future.

The best way to make sure that happens is by keeping source water clean, ensuring the treatment processes make it safe to drink and proving that it's safe to drink. That can only happen if everyone recognizes the principles of sustainability and integrated management and accepts the fact that each person is responsible for maintaining and protecting the environment.

Saskatchewan's Safe Drinking Water Strategy encourages cooperation and partnerships that will allow us to make the best use of a limited resource. It describes the actions needed to deal with the challenges of source protection, water treatment, testing and public reporting. It will also help everyone in the province understand his or her role in conserving and managing water.

Introduction

We in Saskatchewan are blessed with some of the best water in the world. Lakes and rivers cover more than 12 per cent of our province. We also have an abundant supply of groundwater. That much water means it's a resource we sometimes take for granted.

Taking water for granted can lead to problems. While contamination can occur naturally, it can also occur as a result of accidents, carelessness, forgetfulness or even ignorance.

That was demonstrated by the situation that developed in Walkerton, Ontario. Improperly treated water resulted in the deaths of several people. Although the North Battleford water incident didn't result in deaths, it's estimated approximately 7,000 people became ill when cryptosporidium entered the water system.

Prior to the Walkerton emergency, the province was already taking actions to improve the safety of drinking water in Saskatchewan through the Water Management Framework, 1999.

The Safe Drinking Water Strategy builds on that document and responds to the needs identified in the North Battleford Water Inquiry to demonstrate the province's commitment to making the conservation and protection of our water a top priority.

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Although water is plentiful in our province, there is no such thing as naturally pure water. In nature, all water contains some impurities. Some, such as minerals, may be harmless. In fact, some people prefer mineral water simply because the minerals can give the water an appealing taste. However, in some cases, minerals may be considered contaminants and may make water look or taste bad or even make it unsafe to drink.

Saskatchewan's Safe Drinking Water Strategy focuses on the human health issues associated with drinking water and ensures that the water quality needs of everyone are being met.

That requires source-to-tap solutions that will help ensure safe and reliable drinking water. Those solutions focus on a clear and effective regulatory system, a component of which will ensure consumers have all the information they need about the quality of their drinking water; source water protection by improving watershed management and support for infrastructure and operation.

Values and Principles

Establishing a sustainable balance in water management requires maintaining healthy, natural, ecosystems, disturbing natural water systems as little as possible and reducing pollutants as much as possible.

To help us achieve safe, clean and sustainable drinking water, we have developed several principles to guide us. They include:

- **Human Health** is our primary concern;
- **Preventing Risks** to drinking water is a high priority;
- **Openness and Clear Communication** will ensure everyone understands and carries out their responsibilities;
- **Realistic Pricing** acknowledges the value of safe drinking water;
- **Accurate and Timely Information** about water problems and solutions is essential for waterworks owners, operators, regulators and users; and
- **All Levels of Government and Citizens Must Work Together** to develop and implement water management solutions.

Goals & Objectives:

Waterworks systems provide safe, clean and sustainable drinking water:

- waterworks staff are capable and well-trained;
- infrastructure produces water that meets Canadian Drinking Water Quality guidelines; and
- waterworks systems and operations are financially sustainable.

The drinking water regulatory system is clear and effective:

- regulations are clear and ensure that health and drinking water quality will be protected; and
- professional regulatory staff have access to the tools necessary to ensure compliance.

Source waters are protected now and into the future:

- risks to source water quality are known; and
- watersheds are protected, natural purification and protection processes are maximized and potential for contamination is minimized.

Citizens and consumers trust and value their drinking water and the operations that produce it:

- citizens have meaningful access to information about the quality of their water;
- reduced consumption of water;
- consumers value quality water and are willing to pay for it; and
- citizens and consumers trust the quality and reliability of their drinking water systems and are confident in the regulatory system.

103-05018/

The Challenges We Face

We in Saskatchewan like to point to our wide-open spaces, our green lush parkland and our majestic shield zone as some of the reasons to live here. And when we look at a map we see thousands of lakes full of fresh water. That sometimes makes it hard to understand the need to be careful with water. But drought leaves our forests prone to fire, our rivers and lakes low, crops parched, cattle short of water and our drinking water sources reduced to a point where some people are forced into rationing.

The time has come for all of us to work together to meet the challenge of protecting and conserving one of our most valuable resources: water.

Challenge No. 1
Protecting Drinking Water Sources

Like many other jurisdictions around the world Saskatchewan is experiencing pressure on its source water supplies. Protecting and maintaining those sources is a continuous process that requires long-term commitment from the community, stakeholders and watershed residents and is essential in an overall program of drinking water protection.

Any source protection plan has four essential parts. An inventory and characterization of the water source; an up-to-date inventory of all sources of pollution affecting the water source; the type of pollutants being discharged into each watershed must be quantified; and goals and strategies for protecting, monitoring and evaluating each watershed must be developed.

Challenge No. 2
Ensuring adequate treatment

All waterworks owners should determine what impurities are in their water supply and install the equipment that will remove them. This will ensure that the members of their community have an adequate supply of drinking water that meets or exceeds all drinking water standards. This objective is most economical when the source water is the highest quality available (see Challenge No. 1).

The skill level of the people running waterworks is also very important. New regulations will require all facilities to have at least one certified operator by July 15, 2005 and ongoing certification will be contingent on continuing operator education.

Challenge No. 3
Small community systems

The challenge facing many small communities is finding a way to pay for the equipment needed to meet drinking water standards and having qualified staff to run it.

Providing safe drinking water to small communities has several elements, each equally important:

- making affordable water treatment technologies available and making funding available through the Canada/Saskatchewan Infrastructure Program or the Municipal Financing Corporation;
- creating and maintaining the institutional structure needed to ensure the water systems are financially stable; and
- ensuring operators are trained in all aspects of water system maintenance and management.

The right mix of technical, financial and managerial resources is required to ensure safe drinking water. Smaller communities can sometimes meet this challenge through partnerships and resource sharing. A focus on source protection can help make treatment easier and cheaper.

Challenge No. 4
Balancing economic and conservation interests

Municipalities own and are responsible for waterworks and their operations and as owners are responsible for supplying safe drinking water to the public. They are also responsible for ensuring the cost of sourcing, treating and delivering safe water is recovered through user fees and other applicable charges.

Today's drinking water systems must meet economic requirements, protect public health and conserve the resource for future generations. This gets more difficult as environmental conditions become more complex and user demand increases. Meeting this challenge requires long term planning that involves the public, all levels of government and stakeholders.

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Today's drinking water systems must meet economic requirements, protect public health and conserve the resource for future generations. This gets more difficult as environmental conditions become more complex and user demand increases. Meeting this challenge requires long term planning that involves the public, all levels of government and stakeholders.

The Key Elements of the Strategy

Saskatchewan Environment
The province will enhance the water-related regulations, including removing the duplication in waterworks regulatory roles for drinking water quality between Environment and SaskWater, increasing the number of inspections to an average of one to two per year, improving the availability of water quality information for the public and for water regulatory staff, expanding provincial drinking water regulations, implementing the capability to assess fines and increasing the transparency of municipal accountability for quality drinking water.

Saskatchewan Watershed Authority, operating within Saskatchewan Environment
The watershed management responsibilities of SaskWater, Saskatchewan Environment and Saskatchewan Wetland Conservation Corporation will be combined to form a new agency, the Saskatchewan Watershed Authority.

The Saskatchewan Watershed Authority works closely with local governments, farmers, ranchers, communities and associations to implement stewardship and develop programs that protect source water, conserve wetlands and enhance fish and wildlife habitat. This is an effective alternative to a regulatory response as not all uses of the watershed can be regulated.

Saskatchewan Health/Health Regions
New Health Hazard Regulations, under the *Public Health Act, 1994*, are expected to be in place within the next several months. These regulations, which apply to smaller public systems not regulated by Saskatchewan Environment, require the owners or operators of these systems to ensure the water is safe for drinking.

Water System Delivery - SaskWater
In the context of a system based on user-pay principles, the province will offer municipalities consulting and water and wastewater treatment plant operations through Sask Water on a full cost recovery basis to assist them to improve their water treatment infrastructure. Provincial financing assistance to municipalities will continue through the Municipal Financing Corporation. The Canada-Saskatchewan Infrastructure Program also provides grants for water and wastewater system projects.

Roles and Responsibilities

All levels of government, business and members of the public are responsible for maintaining and protecting the environment.

Who Does What?
Municipalities own and are responsible for municipal drinking water facilities and their operation. That includes supplying the public with safe drinking water.

The mandate of the Saskatchewan Watershed Authority will be to develop watershed and aquifer management plans, deliver stewardship programs to protect our water resources; provide public education programs; plan water-based developments considering the potential effects of flood, drought, climate change and their potential effect on source water quality, provide forecasts of stream flow and water levels and direct the operation of water management structures in the province.

The Authority will also work towards balancing competing interests in watersheds by engaging these interests in planning for the use of the watershed.

Saskatchewan Environment will regulate municipal waterworks and all privately owned (publicly accessible) waterworks that have a flow rate of 18,000 litres or more per day. There are about 570 public waterworks across the province serving 850,000 people, 650,000 of them in cities and larger towns. Saskatchewan Environment will also regulate certain pipeline systems.

Saskatchewan Health, through the health regions, will regulate semi-private waterworks that have a flow of less than 18,000 litres per day. These include, for example, on-site water systems serving restaurants, motels, campgrounds, small parks, municipal wells with no distribution system. There are about 1,600 semi-public waterworks across the province. Smaller non-municipal pipeline systems (3-14 service connections) will also be regulated by Health.

About 150,000 people rely on private waterworks including systems at farms, rural homes and cottages. Although private waterworks are not regulated, health regions will interpret test results and provide health-related water treatment advice. Saskatchewan Watershed Authority will operate the Rural Water Quality Advisory Program, which provides subsidized water testing as well as advice on interpreting the results and possible solutions to water quality problems. The provincial laboratory does water testing.

Working Together
The province encourages water management program partnerships between individuals, organizations, governments, communities and business. Partnerships not only improve communications and support, they will help make the Safe Drinking Water Strategy more effective and more affordable.

Since water is everyone's concern we all have a part to play in conserving and protecting this precious resource.

Actions

To make water safe, communities use what is called a multi-barrier approach. This system is universally recognized as the best overall method for protecting drinking water quality. Multiple barriers are in place so that if one barrier fails, there are back-up systems and processes to block the flow of potentially harmful impurities. This series of safeguards along the water supply route is designed to prevent or reduce potential contaminants from making it from source to tap.

The first barrier - keeping clean water clean - means finding the purest possible source water and setting up programs and procedures to prevent contaminants from entering the source. It also means finding the purest possible source water and establishing programs to prevent contaminants from entering any source water supply.

The next line of defence - making it safe - involves removing impurities in the water. This requires determining what impurities are in the water supply and installing the treatment methods needed to remove them.

The final step - proving it's safe - involves setting up strong monitoring programs taking swift, corrective action to deal with problems and reporting to the public on testing vigilance and results

Keeping Clean Water Clean - Source Protection

Saskatchewan Environment will:

- continue to regulate activities such as drinking water treatment and sewage treatment and disposal to ensure source water protection.

  The Saskatchewan Watershed Authority, operating within Saskatchewan Environment, will:

  - work with municipalities, conservation and development authorities, stewardship groups and other interested citizens or groups to develop comprehensive and appropriate watershed management plans, including all aspects of source protection;
  - provide technical assistance and regulatory guidance to industry, agriculture and individual citizens to ensure that source water protection is given proper consideration in economic development; and
  - monitor and report on the health of Saskatchewan watersheds.

Saskatchewan Health will:

- assist citizens who are not connected to a central sewage system to understand how septic system operations can affect water quality.

Making Water Safe To Drink - Water Treatment and System Operation

The province is taking steps to ensure that the owners of waterworks:

- implement treatment methods that best deal with the quality and the characteristics of their source water;
- ensure their operators are trained;
- use the correct testing and monitoring systems;
- make the best use of existing resources;
- upgrade their facilities when water quality standards are not being met; and
- recognize the value of clean, safe drinking water.

The province will:

- continue to take part in developing and updating national drinking water standards and guidelines;
- require waterworks owners to take the steps necessary to protect riparian areas and watersheds;
- put regulations in place that require municipalities to publicly disclose utility rate and capital investment strategies that ensure long-term sustainability of the municipal water system by 2005;
- consult with municipalities and the federal government on changes to the Canada-Saskatchewan Infrastructure Program to meet government objectives under the Safe Drinking Water Strategy;
- amend *The Planning and Development Act* to require municipalities to have bylaws and protection plans in place to protect their water supply by 2007;
- make information available to the public on the status of water systems, individually and provincially; and
- help people understand their roles and responsibilities to conserve and protect water and to recognize that safe drinking water is not an inherent right and that water is a valuable, limited resource.

Proving It's Safe - Water Monitoring and Testing

The province will:

- ensure waterworks owners and operators comply with testing requirements;
- implement standard enforcement and reporting protocols;
- increase enforcement of all approval conditions that protect water supplies; and
- ensure waterworks owners and operators understand the importance of regular testing.

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Implementing this strategy will result in a water management system that will be sustainable for generations to come. The plan fosters partnerships and builds on the programs, policies and strategies that already exist. It also complements and supports the activities and responsibilities of other partners such as municipalities and the owners of private systems.

It will also help ensure that everyone in Saskatchewan is aware of their role in conserving and protecting one of our most valuable resources - water.

Some of the actions discussed can be undertaken quickly, others will take more time. But since water is everyone's concern we all have a part to play in protecting this valuable and limited resource.

We look forward to working with you!

For more information contact:

Water Inquiry Line
Toll free 1-866-SASK-H2O (1866-727-5420)

Saskatchewan Environment website:
www.se.gov.sk.ca

SaskWater website
www.saskwater.com